

SPEECH RECOGNITION DEVICE

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ABSTRACT OF THE DISCLOSURE

10 The speech recognition device, which can realize
speech recognition with a small-scaled circuit, has been
disclosed. The speech recognition device comprises the
similarity circuit, which receives speech input signals
and puts out characteristics based on the self-organizing
algorithm, and the matrix circuit that performs the
matrix operations of the output signal, wherein: the
15 similarity circuit comprises a circuit that calculates
distances between plural multi-dimensional input vectors
and the pattern vectors prepared in advance, calculates a
value corresponding to one dimension using a pair of
neuron MOSFETs, and forms a voltage signal in accordance
20 with the degree of similarity by summing up the current
that flows in each neuron MOSFET; and the matrix circuit,
in which capacitors corresponding to weighting operations
are arranged in matrix, receives a voltage signal in
accordance with the degree of similarity and outputs what
25 is most similar, to the patterns prepared in advance.